AMENDMENTS TO THE CLAIMS

1. **(ORIGINAL)** A method for modifying combustion in a combustion chamber of a 4-stroke internal combustion engine running under standard warm (non-starting) engine temperatures, the method comprising the step of briefly opening a combustion chamber valve sometime during a period spanning:
   a. the latter half of the compression stroke, and
   b. the first half of the power stroke.

2. **(ORIGINAL)** The method of claim 1 wherein the briefly opening of the combustion chamber valve effects an escape of no greater than approximately 15% of the mass of the combustion chamber contents.

3. **(CANCELED)**

4. **(CURRENTLY AMENDED)** The method of ~~**any of the foregoing claims**~~ **claim 1** wherein the combustion chamber valve is briefly opened two or more times during the period.

5. **(CURRENTLY AMENDED)** The method of ~~**any of the foregoing claims**~~ **claim 1** wherein the combustion chamber valve is briefly opened during the period of crankshaft rotation between:
   a. 50 degrees before top dead center, and
   b. 50 degrees after top dead center.

6. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein the combustion chamber valve is briefly opened during the period of crankshaft rotation between:

a. 30 degrees before top dead center, and

b. 30 degrees after top dead center.

7. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein the combustion chamber valve is briefly opened for no greater than approximately 7 degrees of crankshaft rotation.

8. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein the combustion chamber valve is briefly opened for no greater than approximately 5 degrees of crankshaft rotation.

9. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein the combustion chamber valve is briefly opened for no greater than approximately 3 degrees of crankshaft rotation.

10. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein the combustion chamber valve which is briefly opened is an intake valve.

11. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein the combustion chamber valve is briefly opened at or substantially near the time of ignition.

12. **(CURRENTLY AMENDED)** The method of ~~any of the foregoing claims~~ **claim 1** wherein multiple combustion chamber valves are briefly opened during the period.

13. **(ORIGINAL)** The method of claim 12 wherein at least some of the multiple combustion chamber valves are briefly opened during the period starting at different times.

14. **(CURRENTLY AMENDED)** The method of claim 12 ~~or 13~~ wherein the multiple combustion chamber valves include an intake valve and an exhaust valve.

15. **(NEW)** A method for modifying combustion in a combustion chamber of a 4-stroke internal combustion engine running under standard warm (non-starting) engine temperatures, the method comprising the step of briefly opening a combustion chamber valve during a period extending over at least one of the compression stroke and the power stroke, with such brief opening effecting an escape of no more than approximately 15% of the mass of the combustion chamber contents.

16. **(NEW)** The method of claim 15 wherein the combustion chamber valve is briefly opened two or more times during the period.

17. **(NEW)** The method of claim 15 wherein the combustion chamber valve is briefly opened during the period of crankshaft rotation between:
    a. 50 degrees before top dead center, and
    b. 50 degrees after top dead center.

18. **(NEW)** The method of claim 15 wherein the combustion chamber valve is briefly opened during the period of crankshaft rotation between:
    a. 30 degrees before top dead center, and
    b. 30 degrees after top dead center.

19. **(NEW)** The method of claim 15 wherein the combustion chamber valve is briefly opened for no greater than approximately 7 degrees of crankshaft rotation.

20. **(NEW)** The method of claim 15 wherein the combustion chamber valve which is briefly opened is an intake valve.

21. **(NEW)** The method of claim 15 wherein the combustion chamber valve is briefly opened at or substantially near the time of ignition.

22. **(NEW)** The method of claim 15 wherein multiple combustion chamber valves are briefly opened during the period.

23. **(NEW)** The method of claim 22 wherein at least some of the multiple combustion chamber valves are briefly opened during the period starting at different times.

24. **(NEW)** The method of claim 22 wherein the multiple combustion chamber valves include an intake valve and an exhaust valve.